NOTEWORTHY COLLECTIONS

California

Dicentra pauciflora Wats. (Papaveraceae).—Ventura Co., 2 km ne. of Reyes Peak (34°39′30″N, 119°16′15″W). Few small scattered colonies observed on steep n.-facing slope immediately above Beartrap Cr. Plants growing in deep leaf mold within dense forest of *Calocedrus decurrens, Pinus ponderosa, Abies concolor, Quercus chrysolepis,* 1500 m, 12 Jun 1983, *Odion 68* (UCSB), *67* (RSA). Verified by K. R. Stern, Calif. State Univ., Chico. (Voucher)

Significance. Previously known from northern California and southern Oregon. Small populations also occur in the Greenhorn Mts. (Twisselman, Fl. Kern Co. 1967) and San Emigdio Range (*Emmel 562,* RSA), both in Kern Co. This is the first record in Ventura Co. and within the areas covered by floras of Munz 1974 (Southern Calif.) and Smith '76 (the Santa Barbara Region).—Dennis C. Odion, Dept. Biol. Sci., UCSB.

Spirodela punctata (G. F. W. Meyer) Thompson (Lemnaceae).—USA, CA, Humboldt Co., Clam Beach, 15 km n. of Arcata, e. side Hwy 101 (T7N R1E S17 nw. ¼), 8 m, 25 May 1980, *Richards 101* (HSC). Dense population at north end of pond, associated with *Spirodela polyrrhiza* and *Azolla filiculoides.*

Previous knowledge. Known from Asia, s. Pacific, se. US, MO, IL. Reported in CA from San Diego, Fresno, Yolo, Madera and Santa Clara Counties and from the UC Berkeley campus (Alameda Co.). This species is listed as *S. oligorrhiza* (Kurz) Hegelm. by Daubs (Ill. Biol. Monogr. 34. 1965; Rhodora 64. 1962) and Mason (A Fl. Marshes Calif. 1957). It is distinguished from *S. polyrrhiza* by its smaller size and the presence of only 2–3 roots, and from *Lemna* spp. by purple lower surface of frond and multiple roots. Without close examination, however, these features can easily be overlooked and the plants mistaken for *Lemna.*

Significance. Northernmost occurrence in CA and range extension of ca. 480 km n. of Berkeley. This species was also collected on the UC Davis campus in1967 and mislabeled *S. polyrrhiza.* I looked for this population in June 1983 and am doubtful it still exists. I found another population of *S. punctata* in 1980 ca. 5 km w. of Blue Lake, CA (ca. 25 km se. of Clam Beach), *Richards 102* (HSC). Winter storms in 1982 destroyed this population and it has not recovered. *Spirodela punctata* from both Humboldt Co. locations have been observed in flower between June and early November.

Wolffia borealis (Engelm.) Landolt (Lemnaceae).—USA, CA, Mendocino Co., 11.2 km s. of Willits, w. side of Hwy 101 (T17N R13W S16 se.¼), 442 m, 25 Oct 1981, *Richards 104* (HSC). Dense population at surface of small pond, mixed with *Lemna minor* and *Azolla filiculoides.* Verified by W. P. Armstrong.

Previous knowledge. Known from WA, OR, s. Canada, c. and ne. US. In CA reported from Shasta and San Diego Counties. This species has been listed incorrectly as *W. punctata* Griseb. by most Amer. authors. The original *W. punctata* described by Grisebach was synonymous with *W. brasiliensis* Weddell, a species native to s. US and in C. and S. America.

Significance. First record of this sp. in Mendocino Co., a sw. range extension of ca. 250 km from Fall River Mills, Shasta Co.—Daniel V. Richards, Humboldt State Univ., Dept. of Biol. Sci., Arcata, CA 95521.

Colorado

Phacelia constancei Atwood (Hydrophylaceae).—San Miguel Co., ne.-facing slopes in gypsum soils, 2.5 km se. of Gypsum Gap (T43N R16W S6, 38°02′N, 108°39′W), 1830 m, 16 Aug 1983, *Kelley 83-147* (Mesa College Herb., CS).

Previous knowledge. Common on soils derived from the Moenkopi formation in se. UT and ne. AZ.

Significance. This is the first record of the species in CO.—WALT KELLEY, Dept. of Biology, Mesa College, Grand Junction, CO and DIETER H. WILKEN, Dept. of Botany, Colorado State Univ., Ft. Collins 80523.

REVIEW

Intermountain Flora: Vascular Plants of the Intermountain West, U.S.A. Volume 4. By ARTHUR CRONQUIST, ARTHUR H. HOLMGREN, NOEL H. HOLMGREN, JAMES L. REVEAL, and PATRICIA K. HOLMGREN. The New York Botanical Garden, New York. 1984. $77.50 (U.S.), $79.00 (non U.S.). ISBN 0-89327-248-5.

The publication of volume 4 of the Intermountain Flora represents another landmark of botanical excellence for western United States. The Flora, this time published by the New York Botanical Garden, is the third volume of their proposed six volume series, covers Cronquist's Subclass Asteridae and includes 28 families, leaving the Asteraceae for volume 5. This volume was written largely by Cronquist and Noel Holmgren. Cronquist authors 13 families and co-authors four others, two with Jim Reveal (Lamiaceae, Cuscutaceae), and one each with Arthur Holmgren (Caprifoliaceae), and C. L. Hitchcock (Solanaceae). Noel Holmgren authors nine families including the Scrophulariaceae, the largest in the book (215 species, including 104 species of *Penstemon*!). Pat Holmgren contributes the Campanulaceae and, with Noel, the Asclepiadaceae.

The format used is the same as in the preceding volumes, complete with excellent illustrations of each species contributed largely by Jeanne R. Janish, Bobbi Angell and Robin Jess. The book provides complete citation of synonymy, very readable, well-written descriptions, ample discussions of distribution, and perhaps most importantly, comments on past treatments of groups and the rationale for the present treatments. These commentaries, to me, are the best part of the book because they provide historical perspectives and often in-depth discussions of nomenclatural problems; and when coupled with the references, allow for direct access to literature of a group. Even if a person has no direct interest in the Intermountain area, the book is an important reference bringing together much information on the plants of western North America. While the book is invaluable to practicing botanists, it will also be very useful to beginning botanists, non-botanical professionals and amateurs who can use the illustrations to help them through the keys (or one may rely entirely on the pictures to identify plants in question). In this regard the Intermountain Flora is potentially useful to a large segment of the Intermountain population. The book is also, to some degree, user friendly in that both technical and artificial keys are provided in some large genera and species that are known outside the area, but that may eventually be found in the region.

Regarding taxonomy, *Neogaerrhinum* is separated from *Antirrhinum, Fraseria* from *Swertia, Gentianella* and *Gentianopsis* from *Gentiana,* and *Leucophysalis* from *Chaemaesaracha. Tiquilia* replaces our *Coldenia.* However, *Glandularia* is not distinguished from *Verbena.* The careful work of Dempster and Erhendorfer in the *Galium multiflora* complex has been critiqued and reduced to a more "practical" taxonomy (3 varieties) in a lengthy discussion by Cronquist. Likewise, Grant's *Gilia inconspicua* complex has been reduced and *Ipomopsis* is not distinguished from *Gilia.* While Grant admits some elements in the *Gilia inconspicua* complex may be disregarded in favor of more easily discernable morphotaxa, he (pers. comm. 1984) feels that the reduction has gone too far and that taxa such as *Gilia opthalmoides* and *G. clokeyi*